

Remarks

Reconsideration of this Application is respectfully requested.

Claims 1-87 are pending in the application, with claims 1, 15, 29, 42, 56, 75, 76, 84, and 86 being the independent claims. No amendments are being sought at this time.

It is respectfully requested that the reply be entered as it does not require further search or consideration since the application is now in condition for allowance, or in better condition for appeal.

Based on the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Rejection Under 35 U.S.C. § 103 - First Grounds

Section 3 of the Office Action rejects claims 1, 15, 29, 42, 56, 75, 76, 84 and 86 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,727,203 to Hapner ("Hapner") in view of U.S. Patent No. 6,925,550 to Sprangle et al. ("Sprangle"), further in view of U.S. Patent No. 7,031,992 to Khan et al. ("Khan"). For at least the following reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection.

Claims 1, 15, 29, 42, 75, 56, 76, 84 and 86 recite features not taught by the applied references. For example, claim 1 recites, in part (emphasis added), "a second parameter in the instruction containing a value field configured to be passed to *another instruction of the program thread*." Claims 15, 29, 42 and 75 recite, in part (emphasis added), "wherein one of the plurality of parameters in the instruction contains a value field configured to be passed to *another instruction of the program thread*." Claims 56,

76, 84 and 86 recite, in part (emphasis added), “wherein a second parameter in the instruction contains a value field configured to be passed to *another instruction of the program thread*.”

Page 3 of the Office Action admits that “Hapner in view of Sprangle does not specifically teach a second parameter in the instruction containing a value field configured to be passed to another instruction of the program thread.” Rather, the Office Action relies on Khan as allegedly disclosing this feature and states that “Khan teaches an instruction containing multiple parameters configured to be passed to another instruction of the program thread for the purpose [sic] communicating important values amongst instructions for efficient processing (Column 7, lines 15-20).” (See Office Action, page 3). Applicant disagrees with such a characterization of Khan.

Khan teaches that “the startCORDIC instruction passes two parameters to the CORDIC Assist 104.” (See Khan, col. 7, ll. 17-19). Khan defines CORDIC as a “Coordinate Rotation Digital Computer.” (See Khan, col. 1, ll. 20). Further, Khan teaches a DSP (Digital Signal Processor) that includes a “CORDIC Assist 104 [that] is pipelined such that a function generated output, such as a sine/cosine output, is available at every clock cycle” where “the CORDIC Assist 104 shares the Local Register File 112 and the Instruction Decoder 102 with the other DSP functional units.” (See Khan, col. 6, 44-54). Khan further discloses that the “CORDIC Assist 104 can further be configured to respond to a resetCORDIC instruction,” where “the resetCORDIC instruction initializes the stages or segments in the SORDIC Assist 104 that are computed such as CORDIC stages.”

Thus, Khan discloses a functional unit referred to as a CORDIC Assist that responds to two specific instructions. Khan's CORDIC Assist appears to be a functional unit that responds to a software instruction. However, a CORDIC Assist functional unit is not an instruction and therefore is not an instruction within a program thread. Therefore, Khan does not disclose "a second parameter in the instruction containing a value field configured to be passed to another instruction of the program thread," as recited in claim 1. Nor does Khan teach "wherein one of the plurality of parameters in the instruction contains a value field configured to be passed to another instruction of the program thread," as recited in claims 15, 29, 42 and 75, or "wherein a second parameter in the instruction contains a value field configured to be passed to another instruction of the program thread," as recited in claims 56, 76, 84 and 86.

Applicant respectfully submits that Hapner, Sprangle, and Khan, whether taken alone or in combination, do not teach at least these features of claims 1, 15, 29, 42, 56, 75, 76, 84 and 86. Consequently, Applicant respectfully asserts independent claims 1, 15, 29, 42, 56, 75, 76, 84 are patentable over Hapner, Sprangle, and Khan. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 1, 15, 29, 42, 56, 75, 76, 84 under 35 U.S.C. § 103(a) as being unpatentable over Hapner in view of Sprangle and further in view of Khan as set forth in section 4 of the Office Action.

Rejections Under 35 U.S.C. § 103 - Second Grounds

Section 6 of the Office Action rejects claims 1, 15, 29, 42, 56, 75, 76, 84 and 86 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,675,192¹ to Emer et al. (“Emer”) in view of U.S. Patent No. 6,687,812 to Shimada et al. (“Shimada”), and further in view of Khan. For at least the following reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection.

Claims 1, 15, 29, 42, 75, 56, 76, 84 and 86 each recite features that distinguish them from the applied references. For example, claim 1 recites, in part (emphasis added), “a second parameter in the instruction containing a value field configured to be passed *to another instruction of the program thread.*” Claims 15, 29, 42 and 75 recite, in part (emphasis added), “wherein one of the plurality of parameters in the instruction contains a value field configured to be passed *to another instruction of the program thread.*” Claims 56, 76, 84 and 86 recite, in part (emphasis added), “wherein a second parameter in the instruction contains a value field configured to be passed *to another instruction of the program thread.*”

Applicant respectfully submits Emer, Shimada, and Khan, taken alone or in combination, using the reasoning stated above, do not teach at least these features of claims 1, 15, 29, 42, 56, 75, 76, 84 and 86. Consequently, Applicant respectfully asserts independent claims 1, 15, 29, 42, 56, 75, 76, 84 are patentable over Emer, Shimada, and Khan. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 1, 15, 29, 42, 56, 75, 76, 84 under 35 U.S.C. § 103(a) as

¹ The Examiner again refers to U.S. Patent No. 6,675,129 to Emer as was brought to the Examiner’s attention in the January 13, 2010 Amendment and Reply. However

being unpatentable over Emer in view of Shimada, and further in view of Khan, as set forth in section 6 of the Office Action.

Claims 2-14, 16-28, 30-41, 43-55, 57-74, 77-83, 85 and 87

Section 9 of the Office Action rejects claims 2-14, 16-28, 30-41, 43-55, 57-74, 77-83, 85 and 87 under 35 U.S.C. § 103(a) as being unpatentable over Hapner in view of Sprangle, further in view of Khan, and further in view of U.S. Patent No. 5,949,994 to Dupree *et al.* ("Dupree"). For at least the following reasons, Applicant respectfully requests the Examiner reconsider and withdraw the rejection.

As explained above, Applicant respectfully submits claims 1, 15, 29, 42, 56, 75, 76, 84 and 86 are patentable over Hapner, Sprangle, and Khan, whether taken alone or in combination. Applicant respectfully submits that Dupree does not overcome the deficiencies of Hapner, Sprangle, and Khan. Claims 2-14, 16-28, 30-41, 43-55, 57-74, 77-83, 85 and 87 depend from claims 1, 15, 29, 42, 56, 76, 84 or 86 and are therefore also patentable over Hapner, Sprangle, Khan, and Dupree. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 2-14, 16-28, 30-41, 43-55, 57-74, 77-83, 85 and 87 under 35 U.S.C. § 103(a) as being unpatentable over Hapner, Sprangle, Khan, and Dupree as set forth in section 9 of the Office Action.

U.S. Patent No. 6,675,129 is issued to Cambon et al. Applicant again assumes the Examiner meant to reference 6,675,192 and has responded accordingly.

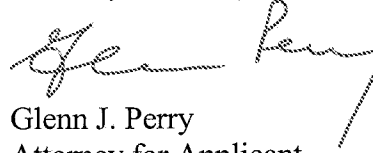
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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